Pest Update (July 14, 2010)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insect from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem instead. **Walnut samples may not be sent in from any location – please provide a picture instead**.

Available on the net at:
http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx

In this issue **pg**

Plant development for the growing season

We are seeing the hydrangeas in bloom across the state we are about on schedule for the year regarding plant and pest development, if not a little ahead.

Current concerns

I have received numerous calls and samples regarding "spit" on junipers. This is the work of a spittlebug nymph. The nymphs (immature bugs) feed under this spittle-like foam in early to mid-summer before becoming adults. The adults also feed on the plant but do not produce spittle so are not as noticeable. The insect, while a curiosity, rarely sucks enough sap from the plant to cause any serious effects. However, if a branch or two is heavily infested, it may die back though even here generally the injury is no more than some yellow spots on the foliage. The insect can be controlled with an application of an insecticide with carbaryl or malathion as the active ingredient, though insecticidal soap or even a high pressure stream of water can be enough to "knock" the population down.

Grasshoppers are also causing a concern in western South Dakota. The high grasshopper populations in the western part of the state are also having an impact on trees and shrubs. Grasshoppers, as those experiencing the problem can attest, will eat almost anything if their population reaches epidemic levels so every tree and shrub is vulnerable to being stripped of foliage, even conifers. So the real question becomes what trees and shrubs are most affected by the defoliation. As a general rule, mature trees can tolerate more defoliation than young trees. Seedling stock, particularly trees that were just planted this spring, can often be killed by a single mid-season defoliation by hoppers. Also conifers, of all ages, are more likely to be damaged by defoliation than deciduous trees. The loss of the new needles, the ones that expanded this year, will often result in death.

E-samples

I have received hackberry samples from a number of counties and the symptoms described are similar. The trees have produced only tufts of foliage and many trees have completely died back. Herbicide has been ruled out on many of these trees though

hackberry is relatively sensitive to herbicide application but this usually results in

cupped leaves (pictured to the left), rather than missing leaves. The remaining leaves are often covered with the galls from the two common psyllids, the hackberry nipplegall maker (*Pachypsylla celtidismamma*) (pictured below) and the hackberry blistergall maker (*P. celtidisvesicula*). These trees will also have distorted buds that bear evidence of another common psyllid, the hackberry budgall psyllid (*P. celtidisgemma*). However, none of these insects appears to be responsible for the widespread injury we are seeing. At this time, the cause for the decline is unknown. About ten years ago we had a similar widespread decline of hackberries but the pattern then was quite different from what we are seeing this year. Then hackberry branches were covered with

yellow leaves that wilted and fell prematurely. Usually affected trees slowing died branch by branch. This year, the trees are either not breaking bud or the leaves fell very early. Much of the early leaf fall seen on hackberry this year can be attributed to the cold spring weather but trees that experienced frost injury are now leafing out and these trees are not. The southern plains experienced a similar problem about five years ago and it turned out to be an insect similar to the psyllids, *Tetragonocephala flava*, which caused trees to either produce only tufts of foliage or died back entirely. I have not seen this insect on the northern plains and the farthest north record I could locate is Kansas but this insect as a possible cause will be investigated as well as other possible stressors.

I am getting a lot of calls on chlorotic maples and many other species of trees. Chlorosis, a symptom where the leaf turns yellow yet the veins remain green, is commonly associated with iron deficiencies in maples and birches on alkaline soils but this year is even showing up on ash and a number of other species. The problem is not the lack of iron in the soil, but the iron becomes unavailable due to the alkaline soils. Iron is not a mobile element meaning that the tree is not able to move the element from older leaves to newer leaves hence iron chlorosis most often shows up on the newest leaves in mid-summer. This summer is even more common perhaps due to the excessively moist soils further limiting root development. This is one reason a common recommendation is to

plant chlorosis susceptible trees such as maple on well-drained soils or plant on a berm.

And once again 'Dog Vomit" fungus is showing up in organic mulches in the eastern side of the state. This fungus, and the name is very descriptive, usually appears in June or July when the temperatures and humidity are high. The fungus generally forms in fresh mulch so most of the calls come in about mulches that have been placed this last spring or fall. The only control is to break up the fungus with a rake to dry it out – it rarely reappears unless you add fresh mulch.

Samples received

Bon Homme County **What is with these hackberries from Avon and Springfield. The spruces look a little poor as well.**

The spruce had no signs or symptoms of the major diseases or insects that affect spruce. They look about as poor as many spruce do this year considering the weather. As to the hackberries, see my comments under Current Concerns. I'll probably stop by to look at these trees early in August.

Brown County **What is causing this abnormal growth on the terminals of this ponderosa pine tree?**

While I have shoot swelling and multiple shoot developing such as this as one of the early symptoms to gall rust, I suspect this is herbicide due to the curling of the terminals. Is a herbicide application nearby a possibility? I would also look at nearby pines to see if there are any galls forming on the branches.

Brown County **Please identify this plant.**

This is wintercreeper (*Euonymus fortunei*), a semi-evergreen shrub/vine/ground cover that is widely planted in milder climates of the eastern and western US. The plant is considered only marginally hardy in Aberdeen but I have seen nice specimen there as well as far out as Mobridge (see picture).

Douglas County **What is wrong with these hackberries?**

See my comments under Current Concerns. I'll probably stop by to look at these trees early in August.

Jerauld County **Is this fire blight on these cotoneasters?**

Yes, and I have received a number of calls on this bacterial disease on cotoneasters during the last week. The typical symptoms are dieback of individual shoots in the shrub and the terminals of these affected shoots having blackened curled leaves. The shoots will also have bacterial "ooze" coming from the lenticels of infected shoots. The best approach for managing the disease on cotoneasters is to prune the entire shrub to within 3 inches of the ground during the dormant season. Usually the new shoots that arise the following spring are free of the disease. I recommend treating the pruner or hand saw between cuts with Lysol Disinfectant just as a precaution against further spread of the disease.

Minnehaha County **What is causing this discoloration of the pear leaves?**

This is pear scab, a disease of pear that is closely related to apple scab. The lesions are usually more blotchy and darker in color than what we typically see on apple and I have even had some people confuse the symptoms with fire blight (though the terminal shoots do not exhibit blackening and curling). The control is similar to that for apple scab.

Union County **What is on the oaks leaves from Jefferson? They are fuzzy bumps along the midrib of the leaf.**

This is one of the many galls that form on oaks, most due to the feeding activity of a cynipid wasp. The woolly leaf gall is one of the fuzzier galls that form on the leaf and while may appear to be a serious concern, particularly if they cover the leaves, are really not a threat to the tree's health. Regardless, there is no effective control for any oak galls so it is a problem we, and the oaks, just live with.

Walworth County **Please let us know if these trees have Dutch elm disease?**

The sample numbered 1 did not have any Dutch elm disease fungi present in it (of course all I can test is what is present in the sample, and that may still mean it is present in the tree). The other three samples all showed Dutch elm disease as well as a number of other common problems with elm, the foliar fungus disease black spot and the woolly elm aphid.

Yankton County **What is causing these leaves to look so terrible?**

This is leaf tatter on a variegated Norway maple. This is a marginally hardy cultivar of a tree that also has problems surviving our state's winters. The tattering of the leaf margins is generally due to cold injury as the buds are expanding in the spring. Only some of the tissue is injured so the leaf expands out distorted. There is no control for this problem, of course, and it is common with most Norway maple cultivars in our region.